

or phones. In all cases, the volume is controlled through the circuitry in the cabinet.

There is a separate tape track or cassette side for each stick slide or series of stick slides bearing viewing material. Each cassette is provided with a sound track of narration describing or commenting on each picture as it comes into view. In addition, the cassette is provided with signals to advance the picture frame in synchronization with the narration. The signals or pulses trigger the solenoid 18 which actuates the pawl 13 and the stick advance (FIGS. 7 and 8). The tape and the cassette also carries extra long pulses or signals at such positions at which it is felt that the viewer will need the instrument to stop in order to take notes, answer questions, or complete mounting activities away from the instrument. When these signals occur, the complete circuit and instrument are shut off and are only put into play again by pressing manual reset button 50 (FIG. 1) which overrides the stopping mechanism. An extra long stop signal or pulse is also inserted at the end of the tape to shut off the instrument when the stick slide is completed.

The operator inserts the stick slide 6 bearing the material to be viewed into the slot 1c of the device and the matching tape or tape cassette into the housing on spindles 41 and 42. Both the tape and the slide are started at their beginning to assure that the sound and picture will be in synchronization. The instrument will then operate automatically from start to finish with audio visual synchronization. Only at such times as the instrument is shut off by the extra long pulses or signals will it be necessary to push the reset button to start the instrument again.

Uses of the device should be apparent from the foregoing description. Thus, the aforementioned objectives and advantages are most effectively attained. Although the preferred embodiment of the invention has been disclosed and described herein, it should be understood that this invention is in no sense limited thereby and its scope is to be determined by that of the appended claims.

Having thus described the invention, what is claimed is:

1. An audio visual device for viewing pictures, symbols, reading material and like material synchronized with sound comprising:

- a housing having audio and viewing passageways therein;
- a lens system in the housing aligned with the material to be viewed;
- support means and a gravity feed advance mechanism in said housing positioned to engage with visual material introduced to said housing and to advance said visual material automatically in a predetermined manner;
- audio means in said housing adapted to receive and transmit an audio program;
- a power source associated with said housing;
- audio control means in said housing responsive to said power source to operate said audio receiving means;
- visual control means responsive to predetermined audio signals from the audio means to automatically activate said advance mechanism to advance the visual material under the force of gravity in synchronization with the audio program;

a drive motor being in the housing connected to the power source;

a tape containing an audio program and a number of spaced audio signals thereon;

drive means connected to the drive motor to receive an audio programmed tape and drive said tape;

an audio pick-up head in said housing and adapted to be brought into engagement with the tape so that the audio program and the audio signals can be picked up by said head;

a first two-stage amplifier system connected to said pick-up head to amplify the audio program and the audio signals;

filter means in said first two-stage amplifier to separate the audio signals from the audio program;

a speaker connected to the first two-stage audio amplifier to receive the audio program therefrom and transmit the program to the listener;

a rectifier connected to the first two-stage amplifier to receive the filtered audio signals and to rectify the signals;

a second two-stage amplifier connected to the rectifier to amplify the rectifier audio signals;

a relay connected to the second two-stage amplifier and to a solenoid with the solenoid being connected to the advance mechanism for the visual material so that when an amplified audio signal is received by the relay, the solenoid will be actuated to advance the visual material in a predetermined manner;

a time delaying amplifier connected to said relay and responsive to an audio signal of predetermined length to receive that signal and activate a second relay which opens a switch between the power source and the motor, stopping operation of the device; and

the switch adapted to be manually closed to restart the device upon demand.

2. An audio visual device for viewing pictures, symbols, reading material and like material synchronized with sound comprising:

- a housing having audio and viewing passageways therein;
- a lens system in the housing aligned with the material to be viewed;

- support means and a gravity feed advance mechanism in said housing positioned to engage with visual material introduced to said housing and to advance said visual material automatically in a predetermined manner;

- audio means in said housing adapted to receive and transmit an audio program;

- a power source associated with said housing;

- audio control means in said housing responsive to said power source to operate said audio receiving means;

- visual control means responsive to predetermined audio signals from the audio means to automatically activate said advance mechanism to advance the visual material under the force of gravity in synchronization with the audio program;

- an audio pick-up head being in the housing for engagement with the audio program vehicle for reception and transmittal of said audio program; and
- a manual pick-up head lever connected to said audio pick-up head and extending externally from said housing for gripping by the operator and shifting of the pick-up head into and away from engagement with the audio program vehicle.

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